



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-1281; Directorate Identifier 2014-NM-241-AD; Amendment 39-18346; AD 2015-25-08]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 777 airplanes. This AD was prompted by an evaluation by the design approval holder (DAH) indicating that the lap splices of the aft pressure bulkhead webs are subject to widespread fatigue damage (WFD) on aging Model 777 airplanes that have accumulated at least 38,000 total flight cycles. This AD requires repetitive inspections for any crack in the aft webs of the radial lap splices of the aft pressure bulkhead, and, if necessary, corrective actions. We are issuing this AD to detect and correct fatigue cracking in the aft webs of the radial lap splices of the aft pressure bulkhead; such cracking could result in reduced structural integrity of the airplane, decompression of the cabin, and collapse of the floor structure.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1281.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1281; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Eric Lin, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6412; fax: 425-917-6590; email: Eric.Lin@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 777 airplanes. The NPRM published in the Federal Register on May 12, 2015 (80 FR 27116). The NPRM

was prompted by an evaluation by the DAH indicating that the lap splices of the aft pressure bulkhead webs are subject to WFD on aging Model 777 airplanes that have accumulated at least 38,000 total flight cycles. The NPRM proposed to require repetitive inspections for any crack in the aft webs of the radial lap splices of the aft pressure bulkhead, and, if necessary, corrective actions. We are issuing this AD to detect and correct fatigue cracking in the aft webs of the radial lap splices of the aft pressure bulkhead; such cracking could result in reduced structural integrity of the airplane, decompression of the cabin, and collapse of the floor structure.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (80 FR 27116, May 12, 2015) and the FAA's response to each comment.

FedEx Express stated:

- All of its Boeing Model 777s would be affected.
- The proposed inspection threshold and intervals would fit into its maintenance schedule.
- The number of man-hours and elapsed time to accomplish the inspections would not impact the overall span-time of its maintenance schedule.
- The proposed inspections do not require any special inspection techniques, training, or tooling.

Request to Clarify Unsafe Condition

Boeing requested that the unsafe condition statement in the NPRM (80 FR 27116, May 12, 2015) be revised to specify that the unsafe condition exists on aging airplanes, rather than new airplanes. Boeing stated that its analysis concluded that airplanes would have to accumulate at least 38,000 total flight cycles before the lap splices of the aft pressure bulkhead webs would be subject to WFD.

We agree with Boeing's request and have revised the unsafe condition statement in the preamble and regulatory text of this final rule accordingly.

Request to Exclude a Service Information Action

American Airlines (AA) requested that the first action specified in step 3.B.5. of the Accomplishment Instructions of Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014, be omitted from the requirements of the proposed AD (80 FR 27116, May 12, 2015). The action is to put the airplane back into a serviceable condition. AA stated that this action does not address the unsafe condition addressed by the proposed rule and that most operators would accomplish the proposed AD requirements during a maintenance visit. AA stated that in the context of a maintenance visit, returning the airplane to a serviceable condition immediately after completion of the inspections and any associated corrective actions would not be possible. AA indicated that an operator would wait until all of the maintenance items scheduled for that visit would have been completed before putting the airplane back into a serviceable condition.

We agree with the commenter's statement that this action does not need to be required by this final rule; several other FAA regulations require restoring the airplane to a serviceable condition before further flight. However, the step of returning the airplane to a serviceable condition is not marked required for compliance ("RC") in Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014; therefore, as noted in paragraph (i)(4)(ii) of this AD, this step may be delayed using an accepted method in accordance with the operator's maintenance or inspection program without obtaining approval of an alternative method of compliance (AMOC). We have not changed this AD in this regard.

Request for Clarification of Relationship Between the NPRM (80 FR 27116, May 12, 2015) and AD 2012-07-06, Amendment 39-17012 (77 FR 21429)

Air New Zealand requested clarification regarding the relationship between the NPRM (80 FR 27116, May 12, 2015) and AD 2012-07-06, Amendment 39-17012 (77 FR

21429, April 10, 2012). Specifically, the commenter asked if the NPRM would supersede AD 2012-07-06; if the AMOC approval included in AD 2012-07-06 would be included in the NPRM; and if the proposed inspections in the NPRM should be done in lieu of or in addition to the existing inspections required by AD 2012-07-06.

We agree with the commenter's request for clarification. This is a new AD applicable to all The Boeing Company Model 777 airplanes and requires repetitive inspections for cracking in the aft webs of the radial lap splices of the aft pressure bulkhead, and corrective actions if necessary. AD 2012-07-06, Amendment 39-17012 (77 FR 21429, April 10, 2012), is applicable to certain Model 777 airplanes and requires revising the maintenance program to update inspection requirements to detect fatigue cracking of principal structural elements throughout the airplane.

An AMOC for AD 2012-07-06, Amendment 39-17012 (77 FR 21429, April 10, 2012), was issued so operators could use the corresponding compliance times and inspections specified in Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014, for the inspection requirements for the corresponding locations specified in Boeing Model 777 Structural Significant Item 53-80-I13A and paragraphs (g) and (h) of AD 2012-07-06. The information regarding this AMOC is included in Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014. Operators are required to accomplish the requirements in this new AD in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014. If the actions of this new AD are done, the requirements of AD 2012-07-06 are met only for areas inspected in accordance with Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014.

Regarding the question about whether the AMOC approval included in AD 2012-07-06, Amendment 39-17012 (77 FR 21429, April 10, 2012), would be included in this AD, paragraph (i) of this AD contains the AMOC approval procedures for this AD.

However, because the existing inspections required by AD 2012-07-06 are not sufficient to preclude WFD in this area, we have not included previous AMOCs issued for AD 2012-07-06 as AMOCs for this AD. We have not changed this AD in this regard.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (80 FR 27116, May 12, 2015) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (80 FR 27116, May 12, 2015).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information under 1 CFR part 51

We reviewed Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014. This service information describes procedures for inspections of the lap splices in the web of the aft pressure bulkhead for cracking, and corrective actions. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 193 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	9 work-hours X \$85 per hour = \$765 per inspection cycle	\$0	\$765 per inspection cycle	\$147,645 per inspection cycle

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2015-25-08 The Boeing Company: Amendment 39-18346; Docket No. FAA-2015-1281; Directorate Identifier 2014-NM-241-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 777-200, -200LR, -300, -300ER, and 777F series airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by an evaluation by the design approval holder indicating that the lap splices of the aft pressure bulkhead webs are subject to widespread fatigue damage on aging Model 777 airplanes that have accumulated at least 38,000 total flight cycles. We are issuing this AD to detect and correct fatigue cracking in the aft webs of the radial lap splices of the aft pressure bulkhead; such cracking could result in reduced structural integrity of the airplane, decompression of the cabin, and collapse of the floor structure.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection of Lap Splice in the Web of the Aft Pressure Bulkhead

Except as required by paragraph (h) of this AD: At the times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014, do a medium frequency eddy current inspection for any cracking in the aft webs of the radial lap splices of the aft pressure bulkhead, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014. Repeat the inspection thereafter at intervals not to exceed 8,400 flight cycles from the previous inspection. If any crack is found during any inspection required by this AD, do the applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014. If a corrective action described in Boeing Alert Service Bulletin 777-53A0078, dated

December 5, 2014, specifies to contact Boeing for appropriate action: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

(h) Exception to Service Information Specifications

Where Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014, specifies a compliance time “after the original issue date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane and the approval must specifically refer to this AD.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (i)(4)(i) and (1)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(j) Related Information

For more information about this AD, contact Eric Lin, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6412; fax: 425-917-6590; email: Eric.Lin@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 777-53A0078, dated December 5, 2014.

(ii) Reserved.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206 766 5680; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on December 10, 2015.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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